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Primary Examiner—Bernarr E. Gregory
Attorney, Agent, or Firm—Robert J. Bennett, Esq.:
Townsend & Townsend & Crew LLP

[57] ABSTRACT

A method and apparatus are disclosed for improving public key encryption and decryption schemes that employ a composite number formed from three or more distinct primes. The encryption or decryption tasks may be broken down into sub-tasks to obtain encrypted or decrypted sub-parts that are then combined using a form of the Chinese Remainder Theorem to obtain the encrypted or decrypted value. A parallel encryption/decryption architecture is disclosed to take advantage of the inventive method.

13 Claims, 2 Drawing Sheets

United States Patent [19]

Collins et al.

[54] **PUBLIC KEY CRYPTOGRAPHIC
APPARATUS AND METHOD**

[75] Inventors: **Thomas Collins**, Saratoga; **Dale
Hopkins**, Gilroy; **Susan Langford**;
Michael Sabin, both of Sunnyvale, all
of Calif.

[73] Assignee: **Tandem Computers, Incorporated**,
Cupertino, Calif.

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380/49

[58] Field of Search 380/9, 28, 29,
380/30, 49, 50

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